Missouri Department of Natural Resources Administrative Policies and Procedures		
Chapter 8 Data Processing Content Standard for Digital Geospatial Metadata Policy		
Metadata Content Review Procedures **Number: 8.02-02**	**Effective date** **April 15, 2003**	**Revised** **February 7, 2005**

Refer to Overview of Geospatial Metadata Review Procedures (8.02-01) for general information about reviews, applicable standards, and the roles and responsibilities of data editors and reviewers.

It is recommended that the editor conduct this review before other staff are asked to conduct reviews. The data editor can expedite the review process by conducting a self-review to ensure that the findings of other staff are minimized. As an option, the editor may choose to perform the review procedures and not invoke other staff to participate. If this option is chosen, the editor will be recorded as both the content and component reviewer in the metadata. This option is not recommended because often times someone who has created something is not ideally suited to take an objective view of it, and because in this case, the editor becomes the primary party responsible for overall quality of the metadata and adherence to department standards.

The metadata content review is intended to ensure that all of the content required by Content Standard for Digital Geospatial Metadata (8.02) is present. ESRI's ArcCatalog, a component of ArcGIS desktop software, is the most efficient tool currently available for testing the presence of all content required by the Federal Geographic Data Committee (FGDC), and is referenced in these procedures. Other methods must rely on the Federal Geographic Data Committee documentation to make these determinations. The Content Standard for Digital Geospatial Metadata (CSDGM) Graphical Representation is recommended for this purpose. As a supplement for any testing method, a document that includes the required elements from both the FGDC and the Department of Natural Resources is available for use. See //n-nr2g/ngis/REVIEW/ DOCUMENTS/All_Required_Content.doc.

Procedures

Examples below are shown in blue text.

Work with a copy of the data and metadata files to be reviewed.
The data editor should be the only one to edit data or metadata so do not risk modifying the original files. Copy all of the files to a folder where you will do your work.

Print the metadata so you can follow it as you conduct the review.

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Make a copy of \\n-nr2g\ngis\REVIEW\DOCUMENTS\Metadata_Content_Checklist.xls **to use as you perform the review, recording all findings in the worksheet provided.**

Verify the presence of content required by the Federal Geographic Data Committee.

1) Working with your copy of the data set, use ArcCatalog to export the metadata to "FGDC CSDGM (TXT)" format, choosing a file name other than the name of the data set.
2) Select the "Import metadata" tool from the metadata toolbar. Be sure to check the box labeled "Enable automatic update of metadata" as you import the text file you created in step one. This tool will insert the word REQUIRED in all capital letters for metadata elements that are required according to the Federal Geographic Data Committee (FGDC) standards on which the department's standards are largely based.

Verify the presence of additional metadata content required by the Missouri Department of Natural Resources.

1) To check for additional elements required by the department, ensure that the following metadata elements are present in the Data_Quality_Information section of the metadata.
   Process_Description
   Horizontal_Positional_Accuracy_Report
   Vertical_Positional_Accuracy_Report, required if vertical data are present.
   Inspect the metadata for attributes that contain vertical data.
2) Ensure that attributes that use coded values are documented to enumerate the meanings of those coded, and inspect the values to ensure that all are listed.

Attribute:
Attribute_Label: REC_TYPE
Attribute_Definition: Record type. Each entry refers to an individual water well, monitoring well, abandonment, reconstruction, heat pump, or pump work at a particular location, blank if unknown.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: A
Enumerated_Domain_Value_Definition: Abandonment
Enumerated_Domain:
Enumerated_Domain_Value: H

Enumerated_Domain_Value_Definition: Heat pump
Enumerated_Domain:
Enumerated_Domain_Value: M
Enumerated_Domain_Value_Definition: Monitoring well

Microsoft Access can be used to inspect ranges of values without having to examine each record:

Rename the dbase (.dbf) file name to be nine characters or less if needed.
Import the dbase file into MS Access. (File / Get External Data / Import).
Design a new query and add the table you just imported.
For each attribute that you are inspecting follow the remaining procedures.
Double-click the attribute you are inspecting.
Click the "Totals" button on the menu.
Run the query. It should produce a list of the unique values in the attribute column.
Compare this list to the enumerated value definitions in the metadata.

ArcMap can also be used to inspect ranges of values without having to examine each record:

In ArcMap, right-click the layer in the table of contents and select "Properties".
Click the "Symbology" tab.
Click "Categories" and select "Unique values".
Select the attribute name in the "Value Field" drop-down box.
Click "Add All Values".